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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,526	02/21/2002	Henry L. Sterchi	723-1259	3040

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EXAMINER
PAPPAS, PETER

ART UNIT	PAPER NUMBER
2628	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/078,526	STERCHI ET AL.
	Examiner	Art Unit	
	Peter-Anthony Pappas	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>27 December 2006</u>.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-16</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-16</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>21 February 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2.   Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. While abstract ideas, natural phenomena and laws of nature are not eligible for patenting, methods and products employing abstract ideas, natural phenomena, and laws of nature to perform a real-world function may well be. For claims including such excluded subject matter to be eligible, the claim must be for a practical application of the abstract idea, law of nature, or natural phenomenon. Diehr, 450 U.S. at 187, 209 USPQ at 8 ("application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection."); Benson, 409 U.S. at 71, 175 USPQ at 676 (rejecting formula claim because it "has no substantial practical application"). To satisfy section 101 requirements, the claim must be for a practical application of the § 101 judicial exception, which can be identified in various ways: the claimed invention "transforms" an article or physical object to a different state or thing; the claimed invention otherwise produces a useful, concrete and tangible result.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ventrella et al. (U.S. Patent No. 6, 545, 682) in view of Bickmore et al. (Pub. No. US

2003/0206170 A1).

5.   In regard to claim 1 Ventrella et al. teaches a method and apparatus for creating,

animating and rendering a user-controlled 3D avatar in a dynamic 3D virtual

environment (col. 2, lines 63-64; col. 7, lines 60-62; col. 9, lines 32-45; col. 18, lines 24-

27; Fig. 9) in real time (col. 10, lines 7-11), wherein said avatar interacts with various

stimuli (tags), within said virtual environment, when said stimuli occurs close (in

proximity) to said avatar (col. 19, lines 40-59; col. 18, lines 13-34). Ventrella et al.

teaches that at least one variable can be associated with said avatar (i.e. the orientation

of said avatar) and that said variable can be used to influence a change in said user-

controlled avatar (col. 14, lines 45-67; col. 17, lines 57-67).

Ventrella et al. teaches that avatar genotypes may be designed by, for example,

the vendor of the simulation system or a third party vendor, to create a set of default or

archetypal avatars. These archetypes may then be customized by the end users or

used unmodified by the end users. To create a complex, highly realistic virtual world;

however, it is desirable to have very large numbers (potentially thousands or millions) of

unique avatars. Creating such an environment can be difficult if so many avatars (or

avatar defaults or archetypes) must be created manually. One solution is to use a

pseudorandom number generator to automatically assign the individual values for each

gene of each avatar, in order to create a large, statistically diverse population of avatars (col. 8, lines 32-49).

Ventrella et al. fails to explicitly teach assigning tag information to said tag. Bickmore et al. teaches defining an object (tag) and assigning avatar reference properties (tag information) to said object, wherein said reference properties designate a type of reaction (defined behavior) for an avatar (character) when, for example, it is dragged over (in proximity to) said object (p. 5, ¶ 61-64; p. 6, ¶ 69). It is noted said object is considered external to said avatar. Said avatar can be animated using a scripted animation sequence (i.e. stored in an avatar script file 520), as defined by user input (p. 4, ¶ 50-53). When said avatar is dragged over an object (within predetermined proximity to a tag) the location of said object and said avatar reference properties are used to modify the animation of said avatar at run-time (p. 6, ¶ 69; p. 3, ¶ 42; p. 5, ¶ 66). It is noted that modifying said animation at run-time is considered to result in real-time animation.

Bickmore et al. teaches that the avatar 114 or 132 is used to allow the document author 110 or the avatar creator 130 to annotate the electronic document 112 with that avatar creator's personal views (p.3 , 38; Fig. 1). In operation, a new avatar context is created and all the required avatar definition and script files are loaded. When the document reader 140 clicks on an avatar link, the first behavior/avatar pair associated with the link is performed. If the document reader 140 drags the avatar 132 over a document object for which the avatar 132 has a defined behavior defined, the avatar

132 performs a DRAG_HANDLE behavior if that behavior has been defined (p. 6, ¶ 69;

Fig. 1).

Bickmore et al. further teaches that the avatars can also interact with the

document itself by, for example, selecting hypertext links in the document pages. This

gives the avatars the ability to provide customized presentations, or "guided tours" of

documents (p. 1, ¶ 11). Three other primitives allow the avatar to simulate mouse clicks

on document objects, thus enabling the avatar to give a guided tour through a series of

hypertext linked objects. These primitives all reference a named object on the

document. For example, in HTML, the referenced name is that defined in the standard

name property of the "A tag" (p. 5, ¶ 58). It is implicitly taught that selecting a hypertext

link for navigation, as taught by Bickmore et al., would result in the display (animation)

of new information, tied to said hypertext link, within an area of said hypertext link (i.e.

the display of a new page of information overlaid on a previous page after said

hypertext link is selected).

It would have been obvious to one skilled in the art, at the time of the Applicant's

invention, to incorporate the assignment of tag information to tags, as taught by

Bickmore et al., into the method taught Ventrella et al., because Ventrella et al. teaches

that stimuli can be prioritized using any reasonable criteria (col. 19, lines 21-58) and

thus by having a priority value directly assigned to a given stimuli, wherein said

assignment is calculated in respect to the priority assignments assigned to respective

stimuli of the same virtual environment, it would allow for a more realistic interaction

between said stimuli and an avatar as a given stimuli would be able to override (via a

set priority value) any other concurrently running stimuli imparting a weight to the

significance of a given stimuli. For example, consider a virtual environment wherein a

given avatar is placed within the boundaries of a burning forest. Such a scene would

warrant careful consideration of the prioritization of stimuli in said virtual environment so

that the stimuli (burning forest) when in close proximity to said avatar would take

immediate priority over all other stimuli concurrently running in said virtual environment

and ideally behoove said avatar to act accordingly and attempt to escape impending

harm, regardless of any other surrounding stimuli and their respective priority settings.

While Ventrella et al. and Bickmore et al. each teach that separate entities (i.e.

third party vendor, end user, document author, avatar creator, document reader) are

involved in both the use and creation of said avatars said references fail to explicitly

teach that the tag is invisible to the user. Official Notice is taken that both the concept

and the advantages of having said avatars setup by different people then those people

who are to use said avatars, thus resulting in said user not having a hand in the setup of

said avatars, are well known and expect in the art. Thus, it would have been obvious to

one skilled in the art, at the time of the Applicant's invention, that either said end user or

said document reader would not be the creators of said avatar, as is supported by the

teachings of both references, because it is conventional in the art, especially in the field

of video games, to have, for example, game designers or the like create characters for

end users to use in a virtual environment, wherein said users are generally unable to

modify the influence of surrounding stimuli on said avatars (i.e. said users would not

know of the presence of a given tag or how the tag will affect the animation) simply

because it would conflict with the scripting of many conventional games and would

render said games non-functional.

6.   In regard to claim 2 Ventrella et al. fails to explicitly teach detecting when the

characters is no longer within the predetermined proximity to the tag and upon such

detection, retuning to the scripted animation for the character. Bickmore et al. teaches

detecting when said avatar is no longer over an object (DRAG_NOHANDLE is enabled)

and upon such detection returns to the scripted animation (i.e. idle behavior, etc.) for the

character (p. 5, ¶ 59; p. 6, ¶ 69). The motivation disclosed in the rejection of claim 1 is

incorporated herein.

7.   In regard to claim 3 Ventrella et al. teaches that the blending of animation scripts,

at each frame of the output script, can be accomplished by computing a feature as a

weighted function of said feature in the corresponding frames of each of the input

scripts (col. 10, lines 11-21). It is noted that the process disclosed above is considered

key framing and that in computer implementations of keyframing the process known as

tweening, inbetweening and/or in-betweening is considered a component thereof.

Ventrella et al. further teaches that skeletal bone rotations are determined by various

sources and then modified, if appropriate, by the Inverse Kinematics (IK) module in the

animation system (col. 11, lines 6-9).

8.   In regard to claim 4 Ventrella et al. teaches defining human-like reaction (based

on personality traits) as the type of reaction and generating an animation that

corresponds to said human-like reaction (col. 5, lines 61-64; col. 3, lines 23-25; col.s 17-

18, lines 32-67 and 1-34, respectively).

9.   In regard to claim 5 Ventrella et al. teaches that the head of the avatar may be turned, for example, in response to a control input from the user or in response to some other stimuli that is independent of the user (col. 18, lines 13-34). It is noted said animation is considered to be executed in real-time.

10.   In regard to claim 6 Ventrella et al. teaches a plurality of tags at different locations in a virtual world (col. 19, lines 21-34). Ventrella et al. fails to explicitly teach assigning tag information to each tag, wherein each tag causes a different dynamic animation sequence to be generated for the character when within a predetermined proximity thereto. The rationale disclosed in the rejection of claim 1 is incorporated herein (Bickmore et al. – p. 6, ¶ 69).

11.   In regard to claim 7 Ventrella et al. teaches that the curiosity gene determines the tendency of the avatar to look, automatically toward a low-priority stimulus in the absence of a high-priority stimulus (col. 19, lines 20-34). Ventrella et al. fails to explicitly teach assigning a priority value to each tag. The rationale disclosed in the rejection of claims 2 and 6 are incorporated herein.

12.   In regard to claim 8 the rationale provided in the rejection of claim 2 is incorporated herein.

13.   In regard to claim 9 the rationale provided in the rejection of claim 3 is incorporated herein.

14.   In regard to claim 10 the rationale provided in the rejection of claim 4 is incorporated herein.

15.   In regard to claim 11 the rationale provided in the rejection of claim 5 is incorporated herein.

16.   In regard to claim 12 the rationale disclosed in the rejection of claim 1 is incorporated herein.

17.   In regard to claim 13 the rationale disclosed in the rejection of claim 7 is incorporated herein.

18.   In regard to claim 14 the rationale provided in the rejection of claim 3 is incorporated herein.

19.   In regard to claim 15 the rationale provided in the rejection of claim 4 is incorporated herein.

20.   In regard to claim 16 the rationale provided in the rejection of claim 5 is incorporated herein.

Response to Amendment

21.   In response to Applicant's remarks in regard to the 35 U.S.C. 101 rejection the Applicant is directed to the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility. If the Applicant has any questions in regard to said rejection the Applicant is invited to contact the examiner.

22.   The prior 35 U.S.C. 112 first paragraph rejection has been withdrawn in lieu of Applicant's remarks.

23.   In response to Applicant's remarks that Bickmore et al. is only directed to a 2D environment, while the respective claims are directed to a 3D environment it is noted that Ventrella et al. teaches a 3D environment and that Ventrella et al. in combination

with Bickmore et al. are considered to read on the respective claim limitations. One

cannot show nonobviousness by attacking references individually where the rejections

are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.

1986).

Ventrella et al. teaches a method and apparatus for creating, animating and

rendering a user-controlled 3D avatar in a dynamic 3D virtual environment (col. 2, lines

63-64; col. 7, lines 60-62; col. 9, lines 32-45; col. 18, lines 24-27; Fig. 9) in real time

(col. 10, lines 7-11), wherein said avatar interacts with various stimuli (tags), within said

virtual environment, when said stimuli occurs close (in proximity) to said avatar (col. 19,

lines 40-59; col. 18, lines 13-34). However, Ventrella et al. fails to explicitly teach

assigning tag information to said tag. Bickmore et al. teaches defining an object (tag)

and assigning avatar reference properties (tag information) to said object, wherein said

reference properties designate a type of reaction (defined behavior) for an avatar

(character) when, for example, it is dragged over (in proximity to) said object (p. 5, 61-

64; p. 6, 69). Applicant is directed the rejection of claim 1 disclosed above in whole.

24.   In response to Applicant's remarks that Bickmore et al. is nonanalogous art (e.g.

"fundamentally different"), it has been held that a prior art reference must either be in

the field of applicant's endeavor (e.g. computer graphics) or, if not, then be reasonably

pertinent to the particular problem with which the applicant was concerned (e.g. the

navigation of virtual avatars in a virtual environment), in order to be relied upon as a

basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24

USPQ2d 1443 (Fed. Cir. 1992). The examiner respectively disagrees that Bickmore et al. is nonanalogous art. While Bickmore et al. is directed to a 2D environment it is noted that Bickmore et al. does not limit the respective invention to only a 2D environment – e.g. the respective claim language includes open-ended language such as "comprising." It is further noted that the mapping (e.g. the application) of 2D techniques into a 3D environment are considered well known to one skilled in the art.

25.   In response to Applicant's remarks that the proposed combination of Ventrella et al. and Bickmore et al. would change the principle operation of the prior art invention being modified, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

26.   In response to Applicant's remarks that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

27.   Applicant's remarks have been fully considered but are not deemed persuasive.

Conclusion

28.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Peter-Anthony Pappas whose telephone number is 571-

272-7646. The examiner can normally be reached on M-F 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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Peter-Anthony Pappas
Examiner
Art Unit 2628

PP

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SUPERVISORY PATENT EXAMINER